NONREIMBURSABLE SPACE ACT AGREEMENT BETWEEN

THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AND

PLANETSPACE, INC.

FOR

COMMERCIAL SPACE TRANSPORTATION CAPABILITIES

BACKGROUND

The National Aeronautics and Space Administration (NASA) has established the Commercial Crew & Cargo Program Office at the Johnson Space Center (JSC) as part of the Exploration Systems Mission Directorate. The objectives of the Commercial Crew/Cargo Program are to:

- implement U.S. Space Exploration policy with an investment to stimulate commercial enterprises in space,
- facilitate U.S. private industry demonstration of cargo and crew space transportation capabilities with the goal of achieving reliable, cost effective access to low-Earth orbit, and
- create a market environment in which commercial space transportation services are available to Government and private sector customers.

Under this program, NASA is entering into agreements with private industry to develop and demonstrate the vehicles, systems, and operations needed to resupply, return cargo from, and transport crew to and from a human space facility, with the International Space Station providing the representative requirements for such a facility.

Once demonstrated, industry will be able to provide these new services to non-NASA customers. NASA also plans to enter the next phase of the Commercial Crew & Cargo Program and purchase services from commercial providers to support the International Space Station.

This SAA represents the signatories' commitment to meet these goals. Specifically, the approach of PlanetSpace to meet these goals is outlined in Appendix 2.

ARTICLE 1. AUTHORITY

This Agreement is entered into by the National Aeronautics and Space Administration, located at 300 E Street, SW, Washington, DC 20546 (hereinafter referred to as "NASA"), and PlanetSpace, Inc., (hereinafter referred to as "PlanetSpace" or "PARTICIPANT") with a place of business at 39 South LaSalle Street, Suite 600, Chicago, IL 60603. NASA's authority to enter into this Agreement is in accordance with the authority set forth in Sections 203(c)(5) and 203(c)(6) of the National Aeronautics and Space Act of 1958, as amended, and NPD 1050.1G.

ARTICLE 2. PURPOSE AND AGENCY COMMITMENT

- A. NASA and PlanetSpace enter into this Agreement to facilitate PlanetSpace's anticipated development of a commercial transportation system capable of ferrying cargo and crew between Earth and Low Earth Orbit (LEO). As part of its commitment to developing this commercial capability, PlanetSpace anticipates investing US \$200,000,000 (two hundred million dollars) in private capital towards its activities. Furthermore, PlanetSpace anticipates completing the first demonstration flight by December 2009.
- B. NASA is committed to partnering with the private sector to facilitate the commercialization of LEO and the development of a commercial capability to ferry goods and people to LEO destinations. Accordingly the agency's Commercial Crew & Cargo Program Office is partnering with PlanetSpace, through this agreement, to provide insight and assistance to PlanetSpace in its attempt to develop this capability.
- C. The scope of the PlanetSpace effort, as applicable, involves the development and operation of an end-to-end space transportation system including ground operations and integration, launch, rendezvous, proximity operations, docking or berthing, orbital operations, reentry, and safe disposal or return. The purpose of this system is to transport crew and cargo between Earth and a LEO destination. This system can also pick up cargo from a LEO destination and dispose of the cargo.
- D. This Agreement shall not be construed to allow PlanetSpace use of the International Space Station (ISS). In the event NASA determines that the ISS may be available

for use, this Agreement shall be amended to reflect the change or use of the ISS shall be covered by a separate agreement.

ARTICLE 3. GENERAL PROVISIONS

- A. PlanetSpace agrees that all news/press statements, arising out of activities to this Agreement, shall be reviewed and concurred on by the NASA JSC Director of Public Affairs, prior to release.
- B. NASA does not endorse or sponsor any commercial product, service, or activity. NASA's participation in this Agreement and/or supply of equipment, facilities, technical information, or services under this Agreement does not constitute endorsement by NASA. PlanetSpace agrees that nothing in this Agreement will be construed to imply that NASA authorizes, supports, endorses, or sponsors any product or service of PlanetSpace resulting from activities conducted under this Agreement, regardless of the fact that such product or service may employ NASA-developed technology.

PlanetSpace agrees the words "National Aeronautics and Space Administration" and the letters "NASA" will not be used in connection with a product or service in a manner reasonably calculated to convey any impression that such product or service has the authorization, support, sponsorship, or endorsement of NASA, which does not, in In addition, with the exception of release of fact, exist. general information more particularly described below, PlanetSpace agrees that any proposed public use of the NASA name or initials (including press releases resulting from activities conducted under this Agreement and all promotional and advertising use) shall be submitted by PlanetSpace in advance to the NASA JSC Director of Public Affairs or designee ("NASA Public Affairs") for review and approval. Approval by NASA Public Affairs shall be based on applicable law and policy governing the use of the NASA name and initials.

Use of NASA emblems/devices (i.e., NASA Seal, NASA Insignia, NASA logotype, NASA Program Identifiers, and the NASA Flag) are governed by 14 C.F.R. Part 1221. PlanetSpace agrees that any proposed use of such emblems/devices shall be submitted for review and approval in accordance with such regulations.

NASA or PlanetSpace may, consistent with Federal law and this Agreement, release general information regarding its own participation in this Agreement as desired.

- C. The Parties shall comply with all applicable laws and regulations including, but not limited to, safety, security, export control, and environmental laws and regulations.
- D. The scope of the collaborative efforts under this Agreement is defined in Article 4 and Appendix 1. All requests for support from NASA covered or related to the efforts of this Agreement shall be coordinated through the NASA Key Official designated in Article 17, including any separate agreements for reimbursable or non-reimbursable work PlanetSpace desires at any NASA center.
- E. The parties agree that nothing in this Agreement shall be construed to imply an agreement to contract in the future. It is the intent of both parties that, should future phases of this collaborative effort materialize, these phases will be accomplished under separate agreements, reimbursable or otherwise.

ARTICLE 4. RESPONSIBILITIES

- A. PlanetSpace shall use reasonable efforts to:
 - 1. Conduct its development program according to the milestones identified in Appendix 1 to this Agreement.
 - 2. Provide NASA with data regarding its progress towards the milestones.
 - 3. Conduct a quarterly meeting with NASA regarding the past quarter's milestones, demonstrating that the success criteria have been met.
- B. NASA shall use reasonable efforts to:
 - 1. Provide a point of contact for PlanetSpace within the Commercial Crew & Cargo Program Office within 60 days after the effective date of this agreement.
 - 2. Provide a library of relevant NASA data/information including, but not limited to, projected requirements of

the International Space Station (ISS) for crew and cargo transportation services, ISS visiting vehicle requirements, and NASA human rating requirements.

- 3. Provide Program know-how regarding the ISS visiting vehicle and NASA human ratings requirements and processes. Resources will be provided on an as-available basis by the Commercial Crew & Cargo Program Office.
- 4. Review data provided by PlanetSpace.
- 5. Attend quarterly meetings with PlanetSpace regarding the past quarter's milestones.
- 6. Within 30 days of each quarterly meeting, provide PlanetSpace a written acknowledgement of milestone completion if NASA ascertains that the milestones of the previous quarter have been accomplished. Nothing in the acknowledgement of milestone completion shall be construed to imply that NASA endorses or sponsors any PlanetSpace product or service resulting from activities conducted under this Agreement. NASA's acknowledgement shall not be construed to imply approval or endorsement of the safety, reliability or appropriateness of any PlanetSpace design, system, architecture or testing methodology.
- 7. NASA may, at its discretion and after coordination with PlanetSpace, attend and observe PlanetSpace milestones.

ARTICLE 5. SCHEDULE AND MILESTONES

The major milestones are as documented in Appendix 1.

ARTICLE 6. FINANCIAL OBLIGATIONS

There shall be no transfer of funds or other financial obligations between NASA and PlanetSpace in connection with this Agreement. Each party shall fund its own participation under this Agreement.

ARTICLE 7. SCHEDULING CONFLICTS

The above schedule and milestones are estimated based upon the parties' current understanding of the projected use of NASA resources. Both parties agree to put forth reasonable efforts and cooperate in good faith to achieve the objectives of this Agreement. In the event NASA's projected usage of its resources changes, PlanetSpace shall be given reasonable notice of the change, so that the schedule and milestones may be adjusted accordingly. parties agree that NASA's usage of its resources shall have priority over the usage planned in this Agreement should a conflict arise, and NASA, in its sole discretion, shall determine whether to exercise that priority. Likewise, should a conflict arise as between two users, NASA, in its sole discretion, shall determine the priority as between the two users. The parties agree that the facilities, equipment, supplies, or services contemplated by this Agreement shall not be performed in any manner which interferes with NASA's overall mission.

ARTICLE 8. NONEXCLUSIVITY

This Agreement is not exclusive; accordingly, NASA may enter into similar Agreements for the same or similar purpose with other U.S. private or public entities.

ARTICLE 9. LIABILITY AND RISK OF LOSS

- A. Each Party hereby waives any claim against the other Party, employees of the other Party, the other Party's related entities (including, but not limited to, contractors and subcontractors at any tier, grantees, investigators, customers, users, and their contractors and subcontractors, at any tier), and employees of the other Party's related entities for any injury to, or death of, the waiving Party's employees or the employees of its related entities, or for damage to, or loss of, the waiving Party's property or the property of its related entities arising from or related to activities conducted under this Agreement, whether such injury, death, damage or loss arises through negligence or otherwise, except in the case of willful misconduct.
- B. Each Party further agrees to extend this cross-waiver to its related entities by requiring them, by contract or otherwise, to waive all claims against the other Party, related entities of the other Party, employees of the other Party and employees of its related entities for injury,

death, damage, or loss arising from or related to activities conducted under this Agreement.

ARTICLE 10. <u>INTELLECTUAL PROPERTY AND DATA RIGHTS - RIGHTS</u> IN DATA

A. General

- 1. "Related Entity" as used in this Data Rights clause, means a contractor, subcontractor, grantee, or other entity having a legal relationship with NASA or Participant that is assigned, tasked, or contracted with to perform specified NASA or Participant activities under this Agreement.
- 2. "Data," as used in this Data Rights clause, means recorded information, regardless of form, the media on which it may be recorded, or the method of recording. The term includes, but is not limited to, data of a scientific or technical nature, computer software and documentation thereof, and data comprising commercial and financial information.
- 3. "Proprietary Data," as used in this Data Rights clause, means Data embodying trade secrets or comprising commercial or financial information that is privileged or confidential.
- 4. The Data rights set forth herein are applicable to employees of Participant and employees of any Related Entity of Participant. Participant shall ensure that its employees and employees of any Related Entity that perform Participant activities under this Agreement are aware of the obligations under this clause and that all such employees are bound to such obligations.
- 5. Data exchanged between NASA and Participant under this Agreement will be exchanged without restriction as to its disclosure, use, or duplication except as otherwise provided in this clause.
- 6. No preexisting Proprietary Data will be exchanged between the Parties under this Agreement unless specifically authorized in this clause or in writing by the owner of the Proprietary Data.
- 7. In the event that Data exchanged between NASA and Participant include a restrictive notice that NASA or Participant deems to be ambiguous or unauthorized, NASA or Participant may notify the other Party of such condition.

Notwithstanding such a notification, as long as the restrictive notice provides an indication that a restriction on use or disclosure was intended, the Party receiving such Data will treat the Data pursuant to the requirements of this clause unless otherwise directed in writing by the Party providing such Data.

- 8. Notwithstanding any restriction on use, disclosure, or reproduction of Data provided in this clause, the Parties will not be restricted in the use, disclosure, or reproduction of Data provided under this Agreement that:
- (a) is publicly available at the time of disclosure or thereafter becomes publicly available without breach of this Agreement;
- (b) is known to, in the possession of, or developed by the receiving Party independent of carrying out the receiving Party's responsibilities under this Agreement and independent of any disclosure of, or without reference to, Proprietary Data or otherwise protectable Data hereunder;
- (c) is received from a third party having the right to disclose such information without restriction; or
- (d) is required to be produced or released by the receiving Party pursuant to a court order or other legal requirement.
- 9. If either NASA or Participant believes that any of the events or conditions that remove restriction on the use, disclosure, or reproduction of the Data apply, NASA or Participant will promptly notify the other Party of such belief prior to acting on such belief, and, in any event, will notify the other Party prior to an unrestricted use, disclosure, or reproduction of such Data.
- 10. Disclaimer of Liability: Notwithstanding any restriction on use, disclosure, or reproduction of Data provided in this clause, NASA will not be restricted in, nor incur any liability for, the use, disclosure, or reproduction of any Data not identified with a suitable restrictive notice in accordance with paragraphs B and H of this clause or of any Data included in Data which Participant has furnished, or is required to furnish to the U.S. Government without restriction on disclosure and use.
- 11. Participant shall use the following, or a similar, restrictive notice as required by paragraphs B and H of this clause. In addition to identifying Proprietary Data with such a restrictive notice, Participant should mark each page containing Proprietary Data with the following,

or a similar, legend: "Proprietary Data - use and disclose only in accordance with notice on title or cover page."

Proprietary Data Notice
These data herein include <enter as applicable:
"Background Data" or "Data Produced by
Participant under a Space Act Agreement"> in
accordance with the Data Rights provisions under
Space Act Agreement provide applicable
identifying information> and embody Proprietary
Data. In accordance with the Space Act
Agreement, NASA will use reasonable efforts to
maintain the data in confidence and limit use,
disclosure, and reproduction by NASA and any
Related Entity of NASA in accordance with
restrictions identified in the Space Act
Agreement <may list specific restrictions listed
in the Agreement>.

B. <u>Data First Produced by Participant under this</u> Agreement

In the event Data first produced by Participant in carrying out Participant responsibilities under this Agreement is furnished to NASA, and Participant considers such Data to be Proprietary Data, and such Data is identified with a suitable restrictive notice, NASA will use reasonable efforts to maintain the Data in confidence and such Data will be disclosed and used by NASA and any Related Entity of NASA (under suitable protective conditions) only for carrying out NASA responsibilities under this Agreement. Upon completion of activities under this Agreement, such Data will be disposed of as requested by Participant.

C. Data First Produced by NASA Under this Agreement

Except for data disclosing an invention owned by NASA for which patent protection is being considered, in the event Participant requests that Data first produced by NASA (or any Related Entity of NASA) in carrying out NASA's responsibilities under this Agreement be maintained in confidence, and to the extent NASA determines that such Data would be Proprietary Data if it had been obtained from Participant, NASA will mark such Data with a restrictive notice and will maintain such marked Data in confidence for a period of two (2) years after development of the Data, with the express understanding that during the aforesaid

restricted period such marked Data may be disclosed and used (under suitable protective conditions) by or on behalf of the U.S. Government for U.S. Government purposes only, and thereafter for any purpose whatsoever without restriction on disclosure and use. Participant agrees not to disclose such marked Data to any third party without NASA's written approval until the aforesaid restricted period expires.

D. Publication of Results

- 1. Recognizing that section 203 of the National Aeronautics and Space Act of 1958 (42 U.S.C. § 2473), as amended, requires NASA to provide for the widest practicable and appropriate dissemination of information concerning its activities and the results thereof, and that the dissemination of the results of NASA activities is one of the considerations for this Agreement, NASA will coordinate proposed publication of results with Participant in a manner that allows Participant a reasonable amount of time to review and comment on proposed publications.
- 2. Consistent with other obligations in this clause, NASA agrees that it will not publish any results without first receiving permission from Participant.

E. Data Disclosing an Invention

In the event Data exchanged between NASA and Participant discloses an invention for which patent protection is being considered, the furnishing Party specifically identifies such Data, and the disclosure and use of such Data is not otherwise limited or restricted herein, the receiving Party agrees to withhold such Data from public disclosure for a reasonable time (presumed to be one (1) year unless mutually agreed otherwise or unless such information is restricted for a longer period herein) in order for patent protection to be obtained.

F. Copyright

In the event Data is exchanged with a notice indicating that the Data is copyrighted and there is no indication that such Data is subject to restriction under paragraphs B or C of this clause (i.e., Data is not marked with a restrictive notice as required by paragraphs B or C of this clause), such Data will be presumed to be published and the following royalty-free licenses will apply.

- 1. If it is indicated on the Data that the Data existed prior to, or was produced outside of, this Agreement, the receiving Party and others acting on its behalf, may reproduce, distribute, and prepare derivative works only for carrying out the receiving Party's responsibilities under this Agreement.
- 2. If the Data does not contain the indication of (1) above, the Data will be presumed to have been first produced under this Agreement and, except as otherwise provided in paragraph E of this clause for the protection of reported inventions, the receiving Party and others acting on its behalf may reproduce, distribute, and prepare derivative works for any purpose.

G. Data Subject to Export Control

Technical data, whether or not specifically identified or marked, that is subject to the export laws and regulations of the United States and that is provided to Participant under this Agreement will be treated as such, and will not be further provided to any foreign persons or transmitted outside the United States without proper U.S. Government authorization, where required.

H. Background Data

In the event Participant furnishes NASA with Data developed at private expense (or in the case of state or local government Data at government expense) that existed prior to, or was produced outside of, this Agreement, and such Data embody Proprietary Data, and such Data is so identified with a suitable restrictive notice, NASA will use reasonable efforts to maintain the Data in confidence and such Data will be disclosed and used by NASA and any Related Entity of NASA (under suitable protective conditions) only for carrying out NASA responsibilities under this Agreement. Upon completion of activities under this Agreement, such Data will be disposed of as requested by Participant.

I. Handling of Data

1. In the performance of this Agreement, Participant and any Related Entity of Participant may have access to, be furnished with, or use the following categories of Data:

- (a) Proprietary Data of third parties that the U.S. Government has agreed to handle under protective arrangements; and/or
- (b) U.S. Government Data, the use and dissemination of which, the U.S. Government intends to control.
- 2. Data provided by NASA to Participant under the Agreement:
- (a) At the time of execution of this Agreement, the Parties agree that the following Proprietary Data of third parties will be provided to the Participant with the express understanding that Participant will use and protect such DATA in accordance with this clause: None
- (b) At the time of execution of this Agreement, the Parties agree that the following U.S. Government Data will be provided to Participant with the express understanding that Participant will use and protect such U.S. Government Data in accordance with this clause: None
- (c) At the time of execution of this Agreement, the Parties agree that the following software and related Data will be provided to Participant under a separate Software Usage Agreement with the express understanding that Participant will use and protect such related Data in accordance with this clause. Unless Participant has entered into a license, consistent with 37 C.F.R. Part 404, for software provided under this Agreement, upon completion of activities under this Agreement, such related Data will be disposed of as instructed by NASA: None
- 3. With respect to such Data specifically identified in this Agreement or specifically marked with a restrictive notice, Participant agrees to:
- (a) Use, disclose, or reproduce such Data only to the extent necessary to perform the work required under this Agreement;
- (b) Safeguard such Data from unauthorized use and disclosure;
- (c) Allow access to such Data only to its employees and any Related Entity that require access for their performance under this Agreement.
- (d) Except as otherwise indicated in 3(c) above, preclude access and disclosure of such Data outside Participant's organization;

- (e) Notify its employees who may require access to such Data about the obligations under this clause and ensure that such employees comply with such obligations, and notify its Related Entity that may require access to such Data about their obligations under this clause; and
- (f) Return or dispose of such Data, as NASA may direct, when the Data is no longer needed for performance under this Agreement.

J. Oral and Visual Information

If information that Participant considers to be Proprietary Data is disclosed orally or visually to NASA, NASA will have no duty to limit or restrict, and will not incur any liability for, any disclosure or use of such information unless (a) Participant orally informs NASA before initial disclosure that such information is considered to be Proprietary Data, and (b) Participant reduces such information to tangible, recorded form that is identified and marked with a suitable restrictive notice as required by paragraphs B and H above and furnishes the resulting Data to NASA within 10 calendar days after such oral or visual disclosure.

K. Classified Material

In the event that access to, acquisition of, or delivery of classified material is required under this Agreement, the Participant must provide a completed Contract Security Classification Specification (DD Form 254 or equivalent) to the NASA Technical Point of Contact identified herein. Transmission and access to classified material shall be in accordance with NASA and U.S Federal Government statutes, regulations, and policies.

ARTICLE 11. INTELLECTUAL PROPERTY AND DATA RIGHTS - PATENT AND INVENTION RIGHTS

Based on the purpose and scope of this Agreement, and the responsibilities of the Parties, NASA has made an administrative determination that the provisions of section 305(a) of the National Aeronautics and Space Act of 1958, as amended (42 U.S.C. § 2457(a)), do not apply to this Agreement. Therefore, title to inventions made (conceived or first actually reduced to practice) as a result of activities performed under this Agreement will remain with the respective inventing party(ies). No invention or

patent rights are exchanged between or granted by such parties under this Agreement except that NASA and PlanetSpace agree to use reasonable efforts to identify and report to each other any invention that is believed to have been made jointly by employees of PlanetSpace and employees of NASA (including employees of such NASA contractors, subcontractors, or other entities), and to consult and agree as to the responsibilities and course of action to be taken to establish and maintain patent protection on such invention and on the terms and conditions of any license or other rights to be exchanged or granted by or between NASA and PlanetSpace.

ARTICLE 12. DISCLAIMER OF WARRANTY

Equipment, facilities, technical information, and services provided by NASA under this Agreement are provided "as is." NASA makes no express or implied warranty as to the condition of such equipment, facilities, technical information, or services, or as to the condition of any research or information generated under this Agreement, or as to any products made or developed under or as a result of this Agreement including as a result of the use of information generated hereunder, or as to the merchantability or fitness for a particular purpose of such research, information, or resulting product, or that the equipment, facilities, technical information, or services provided will accomplish the intended results or are safe for any purpose including the intended purpose, or that any of the above will not interfere with privately owned rights of others. Neither the government nor its contractors shall be liable for special, consequential or incidental damages attributed to such equipment, facilities, technical information, or services provided under this Agreement or such research, information, or resulting products made or developed under or as a result of this Agreement.

ARTICLE 13. TERM OF AGREEMENT

This Agreement becomes effective upon the date of the last signature below and shall remain in effect until the completion of all obligations of both parties hereto, or 3 years from the date of the last signature, whichever comes first.

ARTICLE 14. RIGHT TO TERMINATE

Either Party may unilaterally terminate this Agreement by providing 30 calendar days written notice to the other Party.

ARTICLE 15. CONTINUING OBLIGATIONS

The obligations of the Parties set forth in the following provisions shall continue to apply after the expiration or termination of this Agreement:

ARTICLE 9, "LIABILITY AND RISK OF LOSS"

ARTICLE 10, "INTELLECTUAL PROPERTY AND DATA RIGHTS - RIGHTS IN DATA"

ARTICLE 11, "INTELLECTUAL PROPERTY AND DATA RIGHTS - PATENT AND INVENTION RIGHTS"

ARTICLE 21, "EXPORT LICENSES"

ARTICLE 16. DISPUTE RESOLUTION

Except as otherwise provided in the article of this Agreement entitled "Scheduling Conflicts," for those activities subject to 37 C.F.R. Part 404 under the articles of this Agreement entitled "Intellectual Property and Data Rights," and those situations where a pre-existing statutory or regulatory system exists (e.g. under the Freedom of Information Act, 5 U.S.C. § 552), all disputes concerning questions of fact or law arising under this Agreement shall be referred by the claimant in writing to the appropriate person identified as the "KEY PERSONNEL".

The persons identified as the KEY PERSONNEL for NASA and the PlanetSpace will consult and attempt to resolve all issues arising from the implementation of this Agreement. If the Parties remain unable to resolve the dispute, then the NASA Associate Administrator, Exploration Systems Mission Directorate, or that person's designee will issue a written decision which shall be a final Agency decision for all purposes including judicial review. Nothing in this section limits or prevents either Party from pursuing any other right or remedy available by law after exhaustion of administrative remedies.

ARTICLE 17. KEY PERSONNEL

The following personnel are designated as the key officials for their respective party.

NASA

PlanetSpace, Inc.

Alan Lindenmoyer
Manager, Commercial Crew &
Cargo Program
Mail Stop: QA
2101 NASA Parkway
Houston, Texas 77058

Phone: 281-244-7064 Fax: 281-483-5970

alan.j.lindenmoyer@nasa.gov

ARTICLE 18. MODIFICATION/AMENDMENTS

Any modification to this Agreement shall be executed, in writing, and signed by an authorized representative of NASA and PlanetSpace. Any modification that creates an additional commitment of NASA resources must be signed by the original NASA signatory authority, or successor, or a higher level NASA official possessing original or delegated authority to make such a commitment.

ARTICLE 19. ASSIGNMENT OF RIGHTS

Neither this Agreement nor any interest arising under it will be assigned by either party without the express written consent of the other party.

ARTICLE 20. ANTI-DEFICIENCY ACT

All activities under or pursuant to this Agreement are subject to the availability of appropriated funds, and no provision shall be interpreted to require obligation or provision of funds in violation of the Anti-deficiency Act, 31 U.S.C. 1341.

ARTICLE 21. EXPORT LICENSES

PlanetSpace will be responsible for:

A. Compliance with all U.S. export control laws and regulations, including the International Traffic in Arms Regulations (ITAR), 22 CFR Parts 120 through 130, and the Export Administration Regulations (EAR), 15 CFR Parts 730 through 799, in the performance of this Agreement. In the

absence of available license exemptions/exceptions, PlanetSpace will be responsible for obtaining the appropriate licenses or other approvals, if required, for exports of hardware, technical data, and software, or for the provision of technical assistance.

- B. Obtaining export licenses, if required, before utilizing foreign persons in the performance of this Agreement, including instances where work will be performed on-site at NASA Centers, where the foreign person will have access to export-controlled technical data or software.
- C. All regulatory record keeping requirements associated with the use of licenses and license exemptions/exceptions.
- D. Ensuring that the provisions of this Article apply to its subcontractors.

In the event that either party intends to utilize a foreign person (as defined in the International Traffic in Arms Regulations and the Export Administration Regulations) in the performance of this Agreement, such party shall be responsible for obtaining the required export licenses in advance of the foreign person's participation.

ARTICLE 22. APPLICABLE LAW

U.S. Federal law governs this Agreement for all purposes, including, but not limited to, determining the validity of this Agreement, the meaning of its provisions, and the rights, obligations and remedies of the parties.

ARTICLE 23. SIGNATURE BLOCK

The signatories to this Agreement covenant and warrant that they have authority to execute this Agreement. By signing below, the undersigned agrees to the above terms and conditions.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

PLANETSPACE, INC.

Scott J. Horowitz Associate Administrator,

Exploration Systems Mission

Directorate

Chairman

DATE: 1/31/ 2007

DATE: 1/29/07

APPENDIX 1: Milestones and Success Criteria

Date	Milestone Description/ Objective Success Criteria					
June 2007	Milestone 1: Silver Dart CFD aerodynamics					
	Description: CFD analysis up to Mach 5 for Silver Dart					
	Success Criteria: Completed analysis of Lift to Drag vs. Angle of Attack data shows the current suborbital TPS will operate to Mach 5					
June 2007	Milestone 2: Booster & Dart CFD aerodynamics					
	Description: CFD analysis of launch and flight of booster and Silver Dart					
	Success Criteria: Completed analysis of lift to Drag vs. Angle of Attack and aerodynamic heating are matched to predicted normal operation for the current design during launch to orbit.					
June 2007	Milestone 3: Complete Engineering mockup of					
	Description: Full scale engineering mockup of Silver Dart with completed interior for cargo and crew					
	Success Criteria: Engineering mockup					
	construction completed and road transport					
June 2007	capability proven. Milestone 4: Launch site approval					
3 413 237						
	Description: Selection of a Canadian Launch					
	site with Transport Canada (TC) and FAA					
	approval to proceed.					
	Success Criteria: Signed letter from TC and, if					
	required, the FAA with preliminary approval to					
T 2005	develop Nova Scotia as an orbital launch site.					
June 2007	Milestone 5: Select Launch site in Nova Scotia					
	Description: Selection of actual real-estate for development as a Nova Scotia launch site.					

	Success Criteria: Executed document showing title to parcel of land in Cape Breton for orbital launch complex
Sept 2007	Milestone 6: Test stand infrastructure
	Description: Construction of the test stand.
	Success Criteria: Poured concrete blast
	deflector and steel hold down structure
	including control bunker structure
Sept 2007	Milestone 7: Complete assembly of 3rd stage
bept 2007	Milescone 7. Complete absencity of Starstage
	Description: Production of tanks and aerodynamic faring.
	Success Criteria: Finished production of
	Outer aerodynamic skin complete with ribs
	and stringers
	Propellant Tanks with complete plumbing to
	top of engine valves
	Aerodynamic engine shroud with four fins
	(tail structure)
Sept 2007	Milestone 8: Ablative Liner Manufacture
	Description: Various methods of ablative
	material application tests.
	Guagaga Chitania Cuagagaful production of
	Success Criteria: Successful production of
	quality ablative nozzle parts in preparation for hot fire test as listed below:
	• Four batches of tape-wound ablative
	materials with the diameter of V2 engine throat section
	• One batch of molded silicone material with
	filler with the diameter of V2 engine exit
	cone.
	Binder with documents showing production data for all complex with smaller control
	data for all samples with quality control
	verification of all production test parts.
	Analysis of production and quality data and coloration of the ideal ablative
	and selection of the ideal ablative
Dec 2007	production method based on the data. Milestone 9: Ablative Liner hot fire test
Dec 2007	milescoile 3: ADIACIVE LIHET HOT LIFE TEST
	Description: Each sample from the previous

milestone is hot fire tested to evaluate performance.
Success Criteria: All ablative liner parts are test fired to prove they can withstand 105 second burn time without burn through.

Dec 2007	Milestone 10: Captured test of third stage				
	Description: A full duration burn of the third stage				
	Success Criteria: All data from all systems during captured test are considered nominal and stage is cleared for first flight.				
March 2008	Milestone 11: Assembly of suborbital 3rd stage				
	Description: The 3 rd stage is prepared for solo flight.				
	Success Criteria: Production completed of 3 rd stage with aerodynamic fins ready for shipment to launch pad for first flight.				
March 2008	Milestone 12: Design of Silver Dart GN&C system				
	Description: The Silver Dart/3rd stage GN&C system is designed.				
	Success Criteria:				
	• complete GN&C system design drawings for Silver Dart				
	 Completed GN&C simulation of Silver Dart and third stage suborbital flight proving stability during flight. 				
March 2008	Milestone 13: Silver Dart airframe parts production				
	Description: All airframe subassemblies are manufactured in preparation for first Silver Dart Assembly.				
	Success Criteria: All manufactured parts for Silver Dart airframe are passed by quality control inspection.				

June 2008	Milestone 14: Production of Silver Dart Airframe
	Description: The Silver Dart airframe is assembled and the suborbital Thermal Protection System (TPS) applied.
	Success Criteria: Production of completed Silver Dart airframe and TPS that has passed quality control.
June 2008	Milestone 15: Production of suborbital docking system
	Description: Production of the suborbital docking inter-stage that mounts the 3rd stage to the tail of the Silver Dart.
	Success Criteria: Complete manufactured interstage with escape system mounts passes quality inspection.
June 2008	Milestone 16: Test of solid rocket escape system
	Description: A hot fire ground test of the escape system to prove ignition and operation of system.
	Success Criteria: Data from captured test of solid rockets mounted on suborbital inter-stage shows successful full duration burn.
Sept 2008	Milestone 17: In-atmosphere drop test of Silver Dart
	Description: A Silver Dart is towed to altitude for an un-powered glide back to the runway.
	Success Criteria: The Silver Dart lifting body lands successfully back to a runway and all flight data shows nominal performance.
Sept 2008	Milestone 18: Drop test of 3rd stage recovery system
	Description: The orbital booster parachute recovery system is attached to the suborbital third stage and drop tested into the water.
	Success Criteria: The parachute system deploys

corr	rectly	and	the :	3rd	stage	splashes	dowi	n in
the	water	with	all	dat	a shov	ing nomi	lnal :	flight
and	splash	ndown	con	diti	ons.			

Dec 2008	Milestone 19: Heat pipe TPS demonstration
Dec 2000	milescone is. Heat pipe irs demonstration
	Description: A variety of heat pipes will be
	constructed and evaluated for use in the Silver
	Dart TPS.
	Success Criteria: A ground test of one heat
	pipe design will show that it will function
	successfully as a TPS system for the full range
	of temperature and gas dynamics on the silver
	dart leading edge.
Dec 2008	Milestone 20: Test of booster tank section
	Description: Hydro tests and other weld tests
	are performed to verify that the booster tank
	design meets specification.
	Success Criteria: The propellant tanks pass
	the hydro test and weld integrity tests as
	specified.
March 2009	Milestone 21: Assembly of launch pad
	Description: The concrete launch pad and
	related equipment are constructed.
	refueed equipment are comperated.
	Success Criteria: launch pad, steel gantry and
	assembly building construction are completed.
March 2009	Milestone 22: Mating of Silver Dart to 3rd
	stage
	Description: The first Silver Dart will be
	mated to the 3rd stage in preparation for a
	first flight.
	Success Criteria: Mated 3 rd stage and Silver
	Dart pass quality inspection and systems tests
	and are certified for flight.
March 2009	Milestone 23: First flight of Suborbital
	Silver Dart
	Description: Silver Dart will fly to mach 4.5
	on the 3rd stage and glide back to a runway
	landing.

		Success Criteria: The Silver Dart lands back safely on the runway and the 3 rd stage booster splashes down safely.
June	2009	Milestone 24: Production and test of core
		stage engines
		Description: The Alchemy engines are
		manufactured to run as a gimbaled four-engine
		set for the core stage.
		Success Criteria: Installation of Alchemy
		engines into quad gimbal system passes all
		quality inspections.
June	2009	Milestone 25: Production and test of core
		stage tanks
		Description: Hydro and weld integrity tests for
		core stage propellant tanks.
		Success Criteria: The core stage propellant
		tanks pass the hydro test and weld integrity
		tests as per spec.
Sept	2009	Milestone 26: Hot fire test of 2nd core stage
		Description: The core stage will be tested with all engines at full thrust for full duration burn.
		Success Criteria: All data shows the core
		stage had nominal operation and is now cleared
		for flight.
Sept	2009	Milestone 27: Installation of all main booster
		engines
		Description: The strap on booster engines will
		be installed on the base of the tanks in
		preparation for first flight to orbit.
		Success Criteria: All six strap-on boosters
		pass quality inspection.
Dec	2009	Milestone 28: Final production of orbital
		Silver Dart
		Description: The Silver Dart will be assembled
		in preparation for its first flight.
		THE Propertion for too first fright.
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		Success Criteria: The Silver Dart passes
		inspections and is ready for shipment to the
		launch site.
Dec	2009	Milestone 29: Production and test of booster
		tanks.
		Description: Six completed booster tanks
		complete a cold flow test of the helium
		pressurant system and propellant transfer
		system between tanks.
		Success Criteria: The propellant flows and
		helium pressures and flows are to
	0000	specification.
Dec	2009	Milestone 30: Assembly of main booster
		Description, Divel annually of the outing main
		Description: Final assembly of the entire main
		booster rocket components and they are made
		ready for a trip to the launch pad.
		Success Criteria: Entire rocket assembly
		including the Silver Dart passes all quality
		and system checks and is cleared for transport
		to the launch pad.
		co che radhen pad.

Dec 2009	Milestone 31: Complete the First Demonstration Flight					
	Description: Demonstrate the capability to deliver cargo/payloads that operate within a volume maintained at normal atmospheric pressure to a LEO test bed and safely return cargo.					
	Success Criteria:					
	 Successful first flight of Silver Dart to orbit with recovery of booster components from the ocean surface. 					
	• Successful visit of Silver Dart to an orbital test bed.					
	• Safe return of Silver Dart to earth.					
	 All post flight analysis of data is nominal. 					

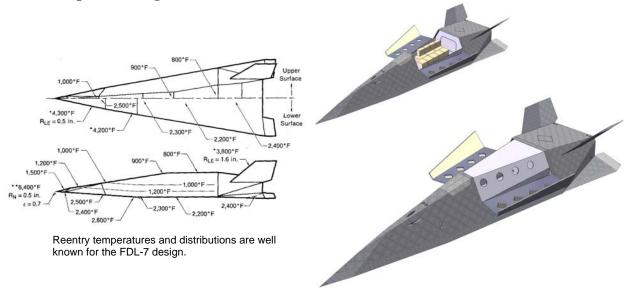
APPENDIX 2: TECHNICAL OVERVIEW

The PlanetSpace Commercial Space Transportation System is based on the redesigned the V-2 engine and utilizes the US Air Force's Flight Dynamics Laboratory-7 (FDL-7) research as the basis for the Silver Dart.

The Silver Dart and its launch vehicle consist primarily of the following components:

- A lower rocket engine and tank cluster consisting of six liquid-fueled strap-on boosters (1st stage), a core (2nd stage), and a 3rd stage.
- A Silver Dart hypersonic glider with a hydrogen peroxide reaction control system (RCS).
- An Orbital Docking and Propulsion System (ODPS)

Depending on mission requirements, various payload modules can be carried by the Silver Dart to orbit and returned for a runway landing.



It is designed to operate as either an unmanned or manned spacecraft. Based on the FDL-7 design, which is stable in flight from mach 22 to 0, the Silver Dart has a glide range of 25,000 miles (one earth circumference) with a cross range of over 4,000 miles. An all metal thermal protection system allows for all weather flying.



The Silver Dart is propelled to low Earth orbit by the PlanetSpace booster. Main propulsion is composed of a pressure-fed liquid propellant reproduction V-2 rocket. The booster recovery system employs previously tested parachute systems to decelerate large payloads for splashdown.

